

Amendments to the Claims

1.-6. (canceled)

7. (currently amended) The ~~network device~~ system of claim 1 ~~15~~, the infrastructure module further comprising at least one standardized application programming interface.

8. (currently amended) The ~~network device~~ system of claim 7, the application programming interface further comprising an application programming interface in accordance with Network Processing Forum.

9. (currently amended) The ~~network device~~ system of claim 1 ~~15~~, the infrastructure module further comprising a namespace to allow registration of components of the infrastructure module.

10. (currently amended) The ~~network device~~ system of claim 1 ~~15~~, the infrastructure module further comprising a control plane protocol module registration module and a packet redirection module.

11. (currently amended) The ~~network device~~ system of claim 1 ~~15~~, the infrastructure module further comprising a binding and discovery module and a transport module to allow the infrastructure module to communicate with other infrastructure modules on other network devices.

12. (currently amended) The ~~network device~~ system of claim 1 ~~15~~, the communication library further comprising a peer control plane protocol module application programming interface.

13. (currently amended) The ~~network device~~ system of claim 1 ~~15~~, the communication library further comprises a messaging layer.

14. (currently amended) The ~~network device~~ system of claim 4 ~~15~~, the communication library further comprising a transport abstraction layer to handle interconnection and transport protocols.

15. (currently amended) A system, comprising:

a control plane having a ~~control plane processor~~ controller control plane protocol module to implement a core functionality of a control plane protocol module;

at least one forwarding plane having a ~~forwarding plane processor~~ worker control plane protocol module to implement a portion of the control plane protocol module that is ~~separated~~ separate and distinct from the core functionality;

a backplane to provide connectivity between the control plane and the forwarding plane;
and

an infrastructure module resident on the control plane and the forwarding plane constructed and arranged to manage the connectivity between the control plane and the forwarding plane; and

a communication library resident on the control plane and the forwarding plane to communicate with the infrastructure module to obtain information about control plane protocol modules and to setup connections with the control plane protocol modules.

16.-18. (canceled)

19. (currently amended) A method of distributing processing in a network device, comprising:

defining controller and worker control plane protocol modules, wherein the controller control plane protocol module implements a core functionality of a control plane protocol module on a control plane, and wherein the worker control plane protocol module implements a

portion of the control plane protocol module that is ~~separated~~ separate and distinct from the core functionality on at least one forwarding plane;

developing corresponding entries in a communications library;

implementing an infrastructure module, the communication library and the controller module on a control plane; and

implementing the infrastructure module, the communication library and the worker modules on a forwarding plane; and

wherein the infrastructure module is constructed and arranged to manage the connectivity between the control plane and the forwarding plane, and wherein the communication library resides on the control plane and the forwarding plane to communicate with the infrastructure module to obtain information about control plane protocol modules and to setup connections with the control plane protocol modules.

20. (original) The method of claim 19, defining a controller and worker control plane protocol modules further comprising providing interfaces between the controller and worker modules.

21. (original) The method of claim 19, developing corresponding entries in a communications library further comprising developing instructions that, when executed, cause the controller and worker control plane protocol modules to communicate.

22. (currently amended) An article of computer-readable media containing instructions that, when executed, cause the computer to:

define ~~defining~~ controller and worker control plane protocol modules, wherein the controller control plane protocol module implements a core functionality of a control plane protocol module on a control plane, and wherein the worker control plane protocol module

implements a portion of the control plane protocol module that is ~~separated~~ separate and distinct from the core functionality on at least one forwarding plane;

develop corresponding entries in a communications library;

implement an infrastructure module, the communication library and the controller module on a control plane; and

implement the infrastructure module, the communication library and the worker modules on a forwarding plane; and

wherein the infrastructure module is constructed and arranged to manage the connectivity between the control plane and the forwarding plane, and wherein the communication library resides on the control plane and the forwarding plane to communicate with the infrastructure module to obtain information about control plane protocol modules and to setup connections with the control plane protocol modules..

23. (original) The article of claim 22, the instructions that cause the machine to define a controller and worker control plane protocol modules further cause the machine to provide interfaces between the controller and worker modules.

24. (original) The article of claim 22, the instructions that cause the machine to develop corresponding entries in a communications library further cause the machine to develop instructions that, when executed, cause the controller and worker control plane protocol modules to communicate.